

PATENT  
Serial No. 10/517,976  
Amendment in Reply to Office Action of August 23, 2006

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for coding a stream of input words using a channel code, the method comprising the acts of:  
precoding the stream of input words into a stream of precoded input words; and  
coding the stream of precoded input words into a stream of groups of N code words;  
~~wherein~~ such that a combined running digital sum of each group of N adjacent code words equals zero.

2. (Previously Presented) The method as claimed in claim 1, wherein N equals 2.

PATENT  
Serial No. 10/517,976

Amendment in Reply to Office Action of August 23, 2006

3. (Previously Presented) The method as claimed in claim 1, wherein after the step of coding the stream of precoded input words into a stream of groups of N code words the method comprises the step of storing the groups of N code words using a groove position modulation on a storage medium.

4. (Previously Presented) The method as claimed in claim 1, wherein coding the precoded stream of input words is achieved using a parity preserving coder.

5. (Previously Presented) The method as claimed in claim 1, wherein coding the precoded stream of input words is achieved using a parity inverting coder.

6. (Previously Presented) The method as claimed in claim 4, wherein the parity preserving coder is a 17PP coder.

7. (Previously Presented) The method as claimed in claim 6, wherein the stream of input words is precoded using the following table:

PATENT  
Serial No. 10/517,976

Amendment in Reply to Office Action of August 23, 2006

In	Out
00	1010
01	0001
10	0111
11	0101
1010	00001000.

8. (Previously Presented) The method as claimed in claim 6, wherein the stream of input words is precoded using the following table:

In		Out
00	->	10 10
10	->	00 01
11	->	01 11
01	->	01 01
11 11	->	00 00 10 00.

9. (Previously Presented) The method as claimed in claim 7, wherein before the act of storing the groups of N code words in using the groove position modulation on the storage medium

PATENT  
Serial No. 10/517,976

Amendment in Reply to Office Action of August 23, 2006

remaining DC components are removed using a high-pass filter.

10. (Currently Amended) An apparatus for storing data on a recording medium comprising an encoder which arranged for coding the stream of precoded input words into a stream of groups of N code words and comprising a precoder for coding the stream of input words into a stream of precoded input words, wherein such that a combined running digital sum of each group of N adjacent code words equals zero.

11. (Previously Presented) The apparatus as claimed in claim 10, wherein N equals 2.

12. (Previously Presented) The apparatus as claimed in claim 10, wherein the apparatus is arranged for storing the groups of N code words using a groove position modulation on a storage medium.

13. (Previously Presented) The apparatus as claimed in claim 10, wherein the encoder is a parity preserving coder.

PATENT

Serial No. 10/517,976

Amendment in Reply to Office Action of August 23, 2006

14. (Previously Presented) The apparatus as claimed in claim 10, wherein the encoder is a parity inverting coder.

15. (Previously Presented) The apparatus as claimed in claim 13, wherein the parity preserving coder is a 17PP coder.

16. (Previously Presented) The apparatus as claimed in claim 15, wherein the precoder is operative to precode the stream of input words using the following table:

In	Out
00	1010
01	0001
10	0111
11	0101
1010	00001000.

17. (Previously Presented) The apparatus as claimed in claim 15, wherein the precoder is operative to precode the stream of input words using the following table:

PATENT  
Serial No. 10/517,976

Amendment in Reply to Office Action of August 23, 2006

In		Out
00	->	10 10
10	->	00 01
11	->	01 11
01	->	01 01
11 11	->	00 00 10 00.

18. (Previously Presented) The apparatus as claimed in claim 16, wherein the apparatus is operative to remove remaining DC components using a high-pass filter before storing the groups of N code words using the groove position modulation on the storage medium.

19. (Currently Amended) A record carrier comprising a stream of input words stored as a stream of groups of N code words, wherein such that a combined running digital sum of each group of N adjacent code words equals zero.

20. (Previously Presented) The record carrier as claimed in claim 19, wherein N=2.

PATENT  
Serial No. 10/517,976  
Amendment in Reply to Office Action of August 23, 2006

21. (Previously Presented) The record carrier as claimed in claim 19, wherein the groups of N code words are stored using a groove position modulation.

22. (Previously Presented) The record carrier as claimed in claim 19, wherein the stream of input words is precoded using the following table:

In	Out
00	1010
01	0001
10	0111
11	0101
1010	00001000.

23. (Currently Amended) The record carrier as claimed in claim 19, wherein the stream of input words is precoded to form precoded words using the following table:

In	Out
00	1010

PATENT  
Serial No. 10/517,976  
Amendment in Reply to Office Action of August 23, 2006

10	0001
11	0111
01	0101
1111	00001000 <sub>i</sub>

wherein "In" represents the stream of input words and "Out"  
represents the precoded words.

24. (Currently Amended) A method for decoding a stream of N code words into a stream of M output words, wherein the stream of M output words is postcoded to form postcoded words using the following table:

In	Out
1010	00
0001	01
0111	10
0101	11
00001000	1010 <sub>i</sub>

wherein "In" represents the stream of M output words and "Out"  
represents the postcoded words.



PATENT  
Serial No. 10/517,976  
Amendment in Reply to Office Action of August 23, 2006

25. (Currently amended) ~~Method~~ A method for decoding a stream of N code words into a stream of M output words, wherein the stream of M output words is postcoded to form postcoded words using the following table:

In	Out
1010	00
0001	10
0111	11
0101	01
00001000	1111;

wherein "In" represents the stream of M output words and "Out" represents the postcoded words.